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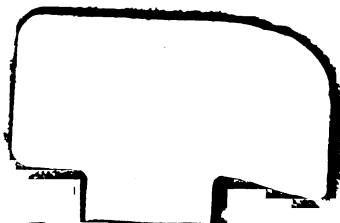
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*U. S. Congress. House. Committee on
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ADDITIONAL SUPPLEMENT TO
HEARINGS

BEFORE THE

SUBCOMMITTEE OF THE [^]COMMITTEE
ON APPROPRIATIONS,

HOUSE OF REPRESENTATIVES,

CONSISTING OF

Messrs. WALTER I. SMITH (chairman), J. W. KEIFER, J. V. GRAFF,
J. J. FITZGERALD, and STEPHEN BRUNDIDGE, Jr.,

IN CHARGE OF

THE FORTIFICATION APPROPRIATION BILL.

WASHINGTON:
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FRIDAY, February 8, 1907.

SENATE AMENDMENTS TO FORTIFICATIONS BILL.

STATEMENTS OF BRIG. GEN. ALEXANDER MACKENZIE, CHIEF OF ENGINEERS, AND COL. FREDERIC V. ABBOT, ASSISTANT TO THE CHIEF OF ENGINEERS, U. S. A.

Mr. SMITH. General, under the item in your supplemental estimate for repair and restoration of batteries and other structures appurtenant to the defenses of Pensacola, etc., you first sent in an estimate of about \$22,000, did you not?

General MACKENZIE. The first estimate submitted was for \$109,355. Of that \$22,100 was for retaining walls for protection against floods, to keep water from running into the rooms of emplacements through the doorways. When the subsequent estimate for a seawall for Pensacola was submitted (an estimate of \$907,100), it was stated that that estimate was in lieu of the \$22,100 of the former estimate, the main seawall doing the work, so that as it stands now the \$22,100 is practically duplicated in the item of \$907,100, and should be taken out of the item of \$109,355. Therefore in the amendment numbered 5 in the bill that authorization, instead of being \$109,355—they have only appropriated half of it—should be \$87,255.

Mr. SMITH. At the time the hearing took place on seawalls and the like on the fortifications bill, this estimate had not been formally received here, but it had been prepared prior to the hearings, had it not?

General MACKENZIE. I think not fully prepared; we did not have all the reports.

Colonel ABBOT. Part of the Pensacola estimate was not in, but most of information was at hand.

Mr. SMITH. I call your attention to the fact that the Secretary of War sent it to the Secretary of the Treasury on the 22d day of December.

General MACKENZIE. We submitted a partial estimate to the Secretary of War at the time the other estimates were submitted, that is to the extent that we had information at that time, but it was concluded in the Secretary's office that inasmuch as there were to be further reports from Pensacola, and from other bureaus, he would not send in that partial estimate from the Chief of Engineers at that time, but would wait until the full reports were in; that is believed to be the reason the partial estimate was not submitted at the time the regular annual estimates were sent in.

Mr. SMITH. Your examination on the fortifications bill I find took place on December 7.

General MACKENZIE. Yes, sir.

Mr. SMITH. And this estimate was sent in by the Secretary of War on December 22.

Do you regard the conditions down there as threatening further destruction?

General MACKENZIE. Yes; they must be so considered. Of course this storm has simply indicated what may happen; and what is more, in some cases it has left the conditions far inferior to what they were originally.

Mr. SMITH. Was this a tidal wave?

General MACKENZIE. It was an exceedingly high tide; it might almost be termed a tidal wave.

Mr. SMITH. To what extent did this storm cut away the land at any of these places?

Colonel ABBOT. At Mobile it cut down the surface so that a number of buildings were undermined, and some were actually overturned, being left standing on their roofs. At Fort Pickens, Pensacola, it removed a large line of sand hills which had always been regarded as a sufficient protection for the post and fortifications against damage by water from the gulf; the parade ground had been covered with large areas of clay and grass that had been planted to keep the sand, of which the reservation originally consisted, from blowing about. But the flow of water across the island was so great in the storm that it cut through this clay cover, and there was a large amount of material thus removed. At Fort McRee the emplacements for four 15-pounder rapid-fire guns were entirely destroyed by undermining.

General MACKENZIE. The conditions, as left, make it practically impossible to occupy the post until they are corrected.

Mr. SMITH. We will begin with amendment No. 3, the protection of Fort Moultrie, Sullivans Island, S. C. How much, in your judgment, would be spent during the next fiscal year there?

Colonel ABBOT. There would be no trouble in spending the whole amount covered by the proposed amendment. The engineer department has on hand there, idle at present, the plant with which it built the Charleston jetties and the fortifications; that plant has worked at the rate of over \$700,000 a year, so that it should be easy to spend the whole sum in the year.

Mr. SMITH. This appropriation is solely for the sea wall?

Colonel ABBOT. Yes, sir.

Mr. SMITH. So that there would not be the same kind of a force employed?

Colonel ABBOT. There would be required a crane, tugboat, derrick, lighters, and other facilities for transporting and handling stone; also pile drivers—these they have on hand.

Mr. SMITH. To what extent is Fort Moultrie, Sullivans Island, an important part of the fortifications at Charleston?

Colonel ABBOT. It forms almost the whole of it. There are two 12-inch guns at Fort Sumter, but all the rest is carried under the name of Fort Moultrie.

Mr. SMITH. Has the ancient fortification at Fort Sumter been entirely replaced?

Colonel ABBOT. No, sir. New batteries have been built on the inside. The old fort acts like a sea wall for the protection of the new batteries.

Mr. SMITH. But it would not last long against modern guns?

Colonel ABBOT. The old brick fort acts simply as a sea wall, protecting the interior batteries from wave action only; the interior battery is built as strong against hostile fire as any other. The battery is simply built on the parade ground of the old fort.

Mr. SMITH. What amount would you regard as necessary at this point this year to prevent further deterioration or loss?

Colonel ABBOT. The more sea wall we can put in the more area we will protect. The island is low, and at the time of the cyclone, in 1893, that portion of the island on which is situated the military post was, most of it, from 1 foot to 3 feet under water. I was in charge of work on the island at the time. All of it being low we can protect as large a proportion of the reservation as we can build sea wall with the money appropriated by Congress.

Mr. SMITH. To what extent has this been recently injured?

Colonel ABBOT. The injury has been progressive. The Quartermaster's Department some years ago built a considerable length of wooden protection, but that is rotting and being washed out. As it goes out the necessity for a permanent protection becomes greater.

Mr. SMITH. Has there been any recent catastrophe at Fort Moultrie, or since 1892?

Colonel ABBOT. No, sir; they have been seriously threatened a number of times, but there has been no absolute injury.

Mr. SMITH. There has been nothing in connection with this item that has occurred or been discovered since the annual estimates were sent in?

Colonel ABBOT. I am doubtful about the date of the last storm. There were some reports came in from officers down there who were very justly frightened at the height to which one storm tide rose, and the effect produced by the waves in cutting away additional portions of the temporary wooden protection. Whether that was before or after the annual estimates were sent in I can not say. The big storms at Charleston occur in September and early October, generally.

Mr. SMITH. Under the item for the protection, preservation, and repair of fortifications, if your sea-wall appropriation is exhausted, would you have no right to expend any money from that?

Colonel ABBOT. I should not think so. Under the ruling of the Comptroller, the existence of a special appropriation for a given purpose precludes the use, for that purpose, of a general appropriation which would be applicable provided the specific appropriation had not been made.

Mr. SMITH. I know of that rule, but the question which arises in my mind was whether, after your specific appropriation had been wholly exhausted, under this language: "For the protection, preservation, and repair of fortifications for which there may be no special appropriation available," you could not, in an emergency, use a portion of that appropriation for that purpose.

Colonel ABBOT. We always try to interpret the laws strictly; we should not apply it in our office in that way. It might be thought all right, but we should not make that application of the funds.

Mr. SMITH. You have not heretofore regarded this as one of the emergent sea wall projects, have you?

Colonel ABBOT. From the Engineer Department point of view it was not emergent, because the batteries were built before the land was

acquired for the post, and the individual emplacements were therefore constructed at the time to withstand a hurricane; the post was not. The garrison is, however, as important a part of the defenses as the batteries are, so that the growth of the post since the batteries were built—and they have a much larger garrison down there than they had—makes the protection of the lives of the defenders more and more necessary; while perhaps it is not as sudden an emergency, it is becoming very important.

Mr. SMITH. You of course remember that you were interrogated as to the construction of sea walls and embankments at the time of the general hearing.

Colonel ABBOT. Yes, sir.

Mr. SMITH. And also last year. You then seemed to regard some of the points in Florida as more emergent for sea walls than this.

Colonel ABBOT. So far as the direct protection of emplacements was concerned, we have generally in our recommendations limited ourselves quite strictly to protecting the batteries themselves against destruction. This case has been considered on a little wider basis, because the land itself is so low that you must protect the men who are to man the batteries.

Mr. SMITH. Is there any emergency requiring this appropriation excepting the gradual decay of the wooden structure that did not exist at the time the annual estimates were sent in?

Colonel ABBOT. The passage of the bill that increases the artillery has probably created an emergency to a certain extent. I don't know what the change in the garrison has been at Fort Moultrie, but they undoubtedly propose to put more men there. The guns were very much under-manned at the time. That is the main post in the defenses of Charleston, and almost the entire force of troops must be housed upon the reservation now under discussion.

Mr. SMITH. Is it not your understanding, Colonel, that there is not any intention to increase the manning materially of the fortifications that are now manned, but that the purpose chiefly is to put in commission the two-thirds of the guns that have never been in commission?

Colonel ABBOT. That holds very true with Charleston, where very few of the guns have been "in commission," and they now will be able to have enough men to put them "in commission." The artillery definition of "in commission" means that the guns are manned. "Out of commission" does not mean that the emplacements and guns are not themselves available for use.

General MACKENZIE. I would like to say that, of course, while our department constructs many sea walls and embankments for the protection of seacoast posts, this individual estimate was submitted by the Quartermaster's Department at our request upon figures prepared in my office. In this case it is a matter which pertains perhaps more to the posts, of which he has a thorough knowledge, than to the emplacements themselves, though both are involved, so there may be details which the Quartermaster-General or the Chief of Artillery could present more fully than I can.

Colonel ABBOT. The amount of money carried by the amendment is the same as our estimate. We estimated on the form of construction and the quantity of material required. This particular case covers so many post questions that it was midway between the

two Departments and it was a question as to which should present the estimate.

General MACKENZIE. In regard to all of these estimates, when it comes to post considerations, the importance of the questions in connection with the post are matters upon which the Chief of Artillery would have more information than we have. What we get in that regard is second hand.

Mr. SMITH. In that connection, if the Quartermaster's Department, which is not a department specially skilled in mechanical construction, wants a thing of this kind done, do you then have engineers go there and give their opinion as to the necessity as well as to the cost, or do you base your opinion upon the Quartermaster's Department as to the necessity?

General MACKENZIE. Where it is work under an appropriation for the construction of sea walls and embankments, of course we would not only express our views as to the importance and the necessity, but also as to the construction. There are times, possibly, when there would be no money for sea walls and embankments, and the quartermaster will rake up a little money to do a little work himself, as in the case of the wooden protection at Fort Moultrie, which has served its temporary purpose to a certain extent.

Colonel ABBOT. Yes, like that wooden revetment, because there was danger of people being drowned.

Mr. SMITH. How long has the wooden revetment been in use?

Colonel ABBOT. My impression is about three or four years.

Mr. SMITH. What is this wooden revetment? Is it such a revetment as you put upon a river, or is it a solid wooden revetment?

Colonel ABBOT. Sheet piles have been put in to prevent the waves from beating over and causing a flow of water across the island. It was not strong enough to hold in the case of a full-strength hurricane, but was useful in ordinary stormy weather.

Mr. SMITH. How much of it has been taken out so far as you know?

Colonel ABBOT. The papers are not in our office, or I should have brought them down with me this morning. But I think about a half or a third of it has gone out, not continuously, but in places, so that the sea comes in behind the piling and washes the filling, so that the gaps widen out. During this particular storm they were very much afraid that it was going to wash away some of their buildings and make a channel across the island. If that protection fails, such a channel is liable to cut through under storm conditions. It has nearly occurred in the past, and Morris Island has cut through in several places. The two islands are quite similar in many respects, and lie to the north and south of the entrance, respectively.

Mr. SMITH. We have had this island for military uses since the civil war, haven't we?

Colonel ABBOT. Yes.

Mr. SMITH. In all the history of this island, since the Government ownership, and prior to the civil war, how much of it has been cut away? Is it materially smaller than before the war?

Colonel ABBOT. Several hundred feet of it has been taken off the upper part of the island, but it is now partly held by the north jetty. When the Government built the north jetty it stopped erosion in one

place and increased it at another; it has been going back steadily for a number of years.

Mr. SMITH. Is this cut away in such a way that it ceases to be available to the Government?

Colonel ABBOT. Along the beach the land is generally higher than it is to the rear. When that washes away it makes the whole island lower and more likely to break through in a storm.

Mr. SMITH. There never was any wall there until this wooden one was put up, was there?

Colonel ABBOT. Not at this portion, but many private houses on that part of the island have been washed away, and my recollection is it was during a cyclonic storm. I have photographs in the office showing the effects of the big storm of 1893.

Mr. SMITH. What kind of houses?

Colonel ABBOT. Houses built for use as summer cottages.

Mr. SMITH. Have any Government buildings ever been washed away?

Colonel ABBOT. I think not since the quartermaster built them there.

Mr. SMITH. Have they barracks and quarters?

Colonel ABBOT. Oh, yes.

Mr. SMITH. A good many of them have no barracks or quarters.

Colonel ABBOT. Yes, but this is the main post, and all of the caretakers for Fort Sumter must also be quartered on this reservation.

Mr. SMITH. Have you anything further to say in explanation of how this item came to be omitted in your original estimate?

Colonel ABBOT. We did not put the item in. It came in through the Quartermaster's Department on our estimate of cost to them, but I don't know why it did not come in with the regular annual estimates.

Mr. SMITH. Do you know whether it was rejected by the Secretary of War at that time or not?

Colonel ABBOT. I have no knowledge about that matter at all.

Mr. KEIFER. I wanted to ask whether Fort Moultrie on this island is regarded as important in the matter of coast defenses there?

Colonel ABBOT. It is the main post in the defense of Charleston Harbor, which now has a deep water entrance, and of the navy-yard there, with its large dry dock and ships. It is a very important point to hold.

Mr. KEIFER. It will have to be maintained in order to make a good defense.

Colonel ABBOT. There is no doubt about that.

Mr. KEIFER. It was always a fortified place before the civil war, was it not?

Colonel ABBOT. Yes, sir.

Mr. SMITH. Now, as to the fourth amendment. "Toward the building of sea walls for the protection of the sites of the fortifications and of the necessary post buildings at Forts Pickens and McRee, Pensacola Harbor, Florida;" and the next item, No. 5, "Toward the repair and restoration of batteries and other structures appurtenant to the defenses of Pensacola and for retaining walls to protect the batteries from floods." What was the original cost of the fortifications at Forts Pickens and McRee? Do you know?

Colonel ABBOT. I have not the figures here with me, and a guess would be unsafe. (A letter from the Chief of Engineers containing in detail this information is printed as an addendum to this hearing.)

Mr. SMITH. How many batteries were actually washed out at these two forts?

Colonel ABBOT. At Fort Pickens no battery was destroyed, but the parapets to most of the batteries, excepting the one inside of the old brick fort, were nearly washed away, and the water got into the magazines and the lower rooms and into the electric-light plants, leaving things in a condition that was certainly not fitted for service. The protective parapets were almost entirely washed away.

Mr. SMITH. Do you mean the earthwork portion of the parapet?

Colonel ABBOT. Yes, sir.

Mr. SMITH. Not the concrete portion?

Colonel ABBOT. That was not injured, but if the erosion had continued much longer some of it would have been undermined. In the same way with Fort McRee, in the same harbor, there were four emplacements of 15-pounder guns absolutely undermined and practically destroyed.

Mr. SMITH. So that when you speak of the parapets, we may understand that you mean only the earthwork, but do not include the concrete portion?

Colonel ABBOT. It finally would have included the concrete, if the erosion had continued.

Mr. SMITH. But when you speak of the parapet you mean simply the earthwork surrounding the concrete?

Colonel ABBOT. Yes.

Mr. SMITH. Have these two estimates, amendments 4 and 5 of the Senate, been based upon actual inspection by the engineer?

Colonel ABBOT. Yes, sir.

Mr. SMITH. How is this earthwork portion of the parapet constructed, in practice, Colonel?

Colonel ABBOT. The earth filling is obtained by borrowing from some other part of the reservation as near to the battery as it can be gotten without making a pond which will hold water and breed mosquitoes. The earth is deposited in front of the concrete work in any one of a dozen different ways depending upon the location and the distance the material has to be hauled.

Mr. SMITH. If you were to fill up the pond, would that be done by dredging?

Colonel ABBOT. Very likely, hydraulic dredging. We have built parapets in Galveston by pumping dredged material; if you have enough of it to be done in one place it pays to build a small dredge to do the work; but if you have a comparatively small battery it is cheaper to use scrapers. It is altogether a question of economy of construction.

Mr. SMITH. The items here in question are based entirely upon the great storm of September last, are they?

Colonel ABBOT. They are based upon what would be necessary to protect areas, decided to be necessary, against a storm equal to that.

Mr. SMITH. What would you say would be the amount necessary to repair the damage done by the storm of September, and to put the forts in as good condition as they were before without the new sea walls?

Colonel ABBOT. The change in the face of the country down there, the removal of the protecting sand hills, makes that question very hard to answer. It was well protected against Gulf storms, as we supposed, by these sand hills, but this storm came and took them away, indicating that they were insufficient protection.

Mr. SMITH. Is the project to erect the sea walls outside of the sand hills?

Colonel ABBOT. No; only to include a sufficient area to protect the batteries, and to inclose them and the garrison buildings in one area of sufficient size to make it safe in case of a storm.

Mr. SMITH. How near to the batteries has the sand been washed away below the level of the ordinary tide?

Colonel ABBOT. The batteries are scattered, and it is nearer to some than to others.

Mr. SMITH. What would be the nearest point that you would say had been eroded?

Colonel ABBOT. I will show you on these blue prints [exhibiting].

Mr. SMITH. Can you give us any idea of how far the shore line has retreated since this storm?

Colonel ABBOT. I don't think there is very much recession in the low-water line, but this high land here [indicating] has been washed down flat.

Mr. SMITH. The high land consisted of sand dunes, and that part which was covered with clay and grass to hold it in place.

Colonel ABBOT. Yes. It has nearly cut through the island in two or three different places, and there is one point right in the middle of the parade where there is now always about four feet of water; how much the shore line has receded is a very hard thing to say. After consultation with the artillery authorities and others concerned, it was decided that we would need this area [indicating].

This is the area that we would need to quarter the men who would attend to these batteries.

Mr. SMITH. Where are the quarters, and have they been destroyed?

Colonel ABBOT. A great many of them are gone—entirely destroyed.

Mr. SMITH. What was the character of the quarters, regular barracks?

Colonel ABBOT. I have never been there, but I presume so.

Mr. SMITH. You think they were destroyed by this storm?

Colonel ABBOT. A number were very much injured. We do not build them, you know.

General MACKENZIE. I understand that they can not be occupied.

Colonel ABBOT. All our range-finder stations were put out of business. There was only one that might possibly be repaired. The others were wiped off the face of the earth.

Mr. SMITH. Was this storm entirely unprecedented?

Colonel ABBOT. I think so; yes, sir; so far as the height of the tide is concerned, but not as high a velocity of wind as we have had before.

General MACKENZIE. It was all done by the wind and water; that created the trouble.

Mr. SMITH. How far along the coast did this storm extend?

Colonel ABBOT. There was no damage done to our works at Galveston. There was much damage to the works at the mouth of the Mississippi River, and Mobile was very much injured. Pensacola was injured a little less, in some ways, and by the time the storm got to Tampa it caused only slight damage comparatively. The storm was concentrated on those three places—New Orleans, Mobile, and Pensacola.

Mr. SMITH. I will say that, although this estimate was in before we prepared the fortification bill, we gave but little attention to it, because of the fact that some months after the disaster you had been before the committee and had not seemed to think that these matters were urgent at that time; at least, it was not called to our attention as an emergency. We were acting upon the assumption that if there was anything desperate down there you would have called our attention to it, and concluded that while these matters might be desirable, they were not emergent.

General MACKENZIE. That occurred probably to a great extent from the cause that I gave—that the Secretary thought better not to send in the partial estimate until we had received from our officers the full details, so far as they could be presented together.

Colonel ABBOT. We sent estimates to the Secretary as we got information from the field. At some places everything was wiped out, and they had to build quarters for the surveying parties before the estimate could be properly prepared. In others there was no means of transporting men to the forts, as the tugs, etc., were sunk.

Mr. SMITH. Turning to amendment No. 6—"toward the repair and restoration of batteries and other structures appurtenant to the defenses of Mobile, Ala., and for rebuilding sea walls and groins for protection of the sites of the fortifications and of the garrison posts"—in this matter you seem to have consolidated the sea walls, the protection of the sites, and the repair and restoration of batteries, whereas in the case of Pensacola you separate them.

Colonel ABBOT. The officer in charge of the Pensacola district was sick. At Mobile the officer naturally reported on his own district first, and then on his neighboring district, that being temporarily in his charge, and we submitted the first estimate which he sent in as soon as it was received. It took a longer time to get the other estimates in. We submitted our data to the Secretary as rapidly as we could get the information from the field. That caused the difference.

Mr. SMITH. How much of this estimate of \$1,089,500 for Mobile is toward the repair and restoration of batteries and other structures appurtenant to the defenses?

General MACKENZIE. This note shows that.

Mr. SMITH. Then it is \$72,500 for repair and restoration of batteries and other structures, and \$1,017,000 for sea walls?

Colonel ABBOT. That is right.

Mr. SMITH. So that the destruction of the batteries and the structures was less at Mobile than at Pensacola?

Colonel ABBOT. \$72,500 as compared with \$87,255.

Mr. SMITH. Whereas the demand for sea walls seems to be greater at Mobile than at Pensacola. Was the storm as violent at Mobile as at Pensacola, from your information?

Colonel ABBOT. In some ways it was worse; but there we did not have any emplacements actually washed out. They had to move the

garrison away entirely from Mobile, and they are still able to quarter part of the troops at Pensacola. The physical damages were worse at Mobile, but our batteries were situated a little farther from the shore line, and they did not suffer as severely.

Mr. SMITH. Is the wall more extensive, or more expensive at Mobile, that the estimate is greater there than at Pensacola?

Colonel ABBOT. The unit of prices is about the same, but there is a longer length, and it is necessary to give protection in the rear. In the rear of Fort Morgan there is a very large bay, in which very heavy waves are formed. Consequently we have got to make a strong interior wall. That is one of the reasons.

Mr. SMITH. Is it your judgment that the amounts appropriated by the Senate are all actually necessary during the next fiscal year for these repairs at Pensacola and Mobile?

Colonel ABBOT. If the troops are to garrison the batteries and keep the defenses in condition to use, I think it will be.

Mr. SMITH. I am now speaking of the rapidity with which you expect to carry on the work. If you get the money will it in fact all be utilized?

Colonel ABBOT. I should think it would be. If we have to make contracts, and if no acceptable bids come in there are likely to be delays, and we might not need it, but if things work out right we ought to be able to expend the amount given.

Mr. SMITH. Is it usual with you in the first fiscal year that you are authorized to create any considerable work of this kind, to be able to expend half of the money?

Colonel ABBOT. Not where we are constructing new structures like batteries, where the plans have been carefully prepared. Then it takes some time. But with regard to sea walls, the location has been approved, and all we have to do is to go ahead and drive the piles and put the stone in; it is just a question of how fast you can get contractors to supply material and drive the piles.

Mr. SMITH. In constructing these sea walls, generally speaking, they rest upon piles, do they not?

Colonel ABBOT. Yes, sir; in all these estimates excepting Fort St. Philip they are supported on creosoted piles.

General MACKENZIE. I am sorry we did not get the photographs in regard to Fort Morgan to bring with us, but they were not in our hands. That tells the tale down there.

Mr. SMITH. Amendment No. 7: "For rebuilding and strengthening the levees for protection of the site of the defenses and the garrison posts at Fort St. Philip, New Orleans, La., \$139,800." Is this due to the disaster of last September?

Colonel ABBOT. Yes, sir.

General MACKENZIE. This is shown on this blueprint [exhibiting]. It came from the sea side and not from the river side.

Mr. SMITH. What is the distance from the river to the sea there?

Colonel ABBOT. Somewhere in the vicinity of a mile, if I recollect right. It is flat and low and the water of the Gulf blew up on the level land and then continued to go across. The wind piled and pounded the waves against this levee, and the dead trees and everything of that kind that had been drying on the flat were carried along and acted like battering rams, breaking down the Gulf levee so that the water submerged everything. The waves beat from the seaside;

the river itself being high on the other side of the river levee, a number of breaks in that levee also were formed by wave action.

Mr. SMITH. You have a levee on both sides of that fort?

Colonel ABBOT. Yes, sir.

Mr. SMITH. One against the sea and one against the river?

Colonel ABBOT. Yes, sir; the water from the Gulf blows right up the inclined plane from the Gulf when the wind comes from the right direction.

Mr. KEIFER. It brings the tide in from the sea and the wind carries it up?

Colonel ABBOT. The waves break, and the wind catching behind the nearly vertical breaking waves forces the water ahead of it so that it pumps the water up against the back levee. The level of the water of the Gulf is, under normal conditions, much below the back levee. The back levee, however, is exposed to the wave action, as described above, from a considerable area of choppy sea. The river levee is not exposed to the same wave action because the river is not as broad as the area next the back levee.

Mr. SMITH. This disaster to some extent injured the fire-control system at all of these general localities, did it not?

Colonel ABBOT. Yes, sir; it completely destroyed the fire control at Fort Morgan; it injured it to a very considerable extent at Fort Pickens, and at Fort St. Philip the two buildings are still standing, but are not in a condition to be occupied without extensive repairs.

Mr. SMITH. When you say "destroyed," what portion do you mean was destroyed; were the conduits down?

Colonel ABBOT. They had not put in for the permanent finished fire control at either of those places. The original installation of the experimental type was at Pensacola, and was paid for, not out of the fortification appropriation, but out of the appropriation for the Ordnance and Fortification Board as an experiment. The installation had a number of cables temporarily laid underground, but not put down in the way that we would put them in a permanent installation, and some of it was, I think, overhead wiring.

Mr. SMITH. What is there to prevent this work being done out of the regular appropriation for fire control?

Colonel ABBOT. There is nothing, excepting that the money is now expended in accordance with the views of the present Chief of Artillery, Chief of Engineers, and Chief Signal Officer, who all desire to put it into complete permanent installations at a few points only, completing one harbor at a time.

Mr. SMITH. Of course you haven't any money from this bill for that fire control, so that the only real obstacle to reconstructing this out of the general appropriation carried in this bill is that you would like to have the whole of this money for entire new work; there is no legal obstacle. This is the case in which you only had temporary installation, is it not?

Colonel ABBOT. This is where the use of the word "temporary" made us lots of trouble.

Mr. SMITH. Part of this will have to be rebuilt, will it not—the poles and wires and things of that kind? We are constantly replacing this provisional work under this appropriation.

Colonel ABBOT. We are taking one harbor at a time and finishing it up. As we do that we utilize the provisional system that has been in the same harbor.

Mr. SMITH. I notice that the Senate also largely increases the fire-control system appropriation, adding \$500,000 to it. This was done, as I understand it, upon the basis of increased artillery force, was it not?

Colonel ABBOT. I do not know as to that.

Mr. SMITH. That was the basis upon which the estimate was sent down?

General MACKENZIE. That might be partially true. Then, of course, I think it was the desire to complete the work a little more rapidly.

Mr. SMITH. I assumed, if this additional amount came in from the War Department, that it was based upon the artillery increase.

You have no further information that you can give us on this subject, have you?

Colonel ABBOT. No; excepting just to this extent: The fire control is needed all over the United States, and neither this sum, nor that originally appropriated, will begin to complete the work. It is a question simply of the rate at which Congress is willing to supply the money. Our rate of progress is strictly dependent on that.

Mr. SMITH. The provisional system has been installed at every place in the United States.

Colonel ABBOT. Enough for drill purposes.

Mr. SMITH. So that the increase of artillery, so far as you know, would not necessitate any more rapid progress than would be required without it?

Colonel ABBOT. That would be a question for the administrative officers to settle—those who are responsible for the instruction of the artillery troops.

Mr. SMITH. The Senate has increased the amount for the construction of the seacoast batteries in the Hawaiian Islands and at Manila \$100,000. I suppose there is nothing further to add in regard to that beyond what was given in the former hearing.

General MACKENZIE. Since that time the Coast Defense Board have had another meeting, and there was submitted to the Secretary a recommendation that they could expend an additional amount of \$350,000 to very good advantage. I think the Secretary had this as much at heart as anything he has ever brought up.

Mr. SMITH. But they also had that in the original estimates.

General MACKENZIE. I have a feeling myself that we can not go any too fast in the Hawaiian Islands.

Mr. SMITH. If you get what the Senate gives you here you will have \$460,000 that has never been even allotted.

General MACKENZIE. Oh, yes; we have the complete plan, and we have already, you might say, started the work.

Mr. SMITH. Since the hearings were had?

General MACKENZIE. Yes, sir.

Colonel ABBOT. On the \$260,000, not on the new appropriation.

Mr. SMITH. That will give you \$460,000 that you have not allotted at that point.

General MACKENZIE. We can spend \$460,000 to better advantage than \$260,000.

WAR DEPARTMENT.
OFFICE OF THE CHIEF OF ENGINEERS.
Washington, February 9, 1907.

SIR: In accordance with request made at the hearing of February 8 before your subcommittee, I have the honor to report that the following are the estimated values of the structures erected by the Engineer and Quartermaster's Departments, and of the armament furnished by the Ordnance Department at the defenses of Pensacola, Mobile, and New Orleans, which will be protected by the sea walls for which estimates are submitted in House documents 359 and 360, Fifty-ninth Congress, second session:

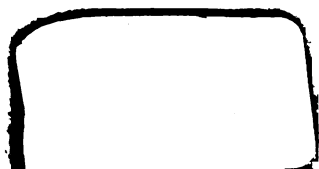
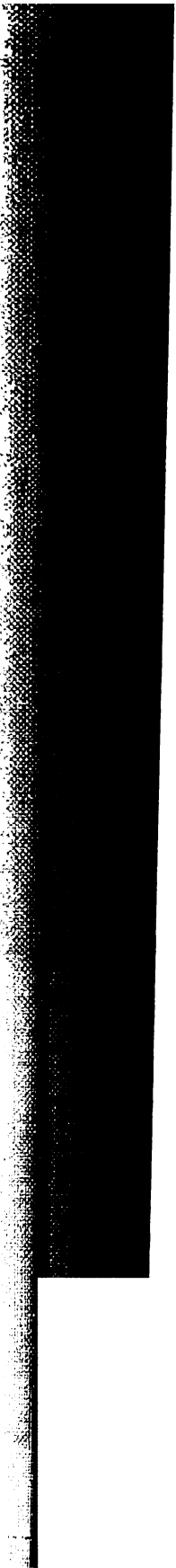
Pensacola, Fla.:		
Fort Pickens	-----	\$1, 529, 700. 47
Fort McRee	-----	311, 758. 65
		<hr/> \$1, 841, 459. 12
Mobile, Ala.:		
Fort Morgan	-----	1, 583, 054. 53
Fort Gaines	-----	255, 105. 23
		<hr/> 1, 838, 159. 76
New Orleans, La.:		
Fort St. Philip	-----	1, 021, 975. 80
		<hr/> 4, 701, 594. 68
Total	-----	

Very respectfully,

A. MACKENZIE,
Brig. Gen., Chief of Engineers, U. S. Army.

HON. WALTER I. SMITH,
Chairman subcommittee on Fortifications, Committee on Appropriations,
U. S. House of Representatives, Washington, D. C.





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